

REMARKS

Amendments

Applicant corrected the dependency of claim 12, to reflect its proper dependence from claim 11. Correspondingly, claims 13, 14, and 15 were corrected to depend from claim 12, rather than from claim 11. The antecedent language in these claims makes clear the appropriateness of the changes.

The Anticipation Rejections

Claims 1, 2, 11, 13, 14, 23, 24, and 33 are not anticipated under 35 U.S.C. § 102(b) by Kim (US 2002/0141349). A reference anticipates a claim only if it teaches (explicitly or implicitly) every limitation of the claim, in the identical arrangement claimed. Kim decidedly does not teach every limitation of the allegedly anticipated claims and therefore fails as a matter of law to anticipate them.

For example, independent claim 1 includes the following limitations:

1. A method of channel data rate adaptation in a wireless communication network, the method comprising:
setting a data rate for a communication channel to be used for transmitting data to a remote receiver at a variable transmit power that is controlled upward and downward by the remote receiver as needed to achieve a desired received data quality at the remote receiver;
monitoring transmit power information for the communication channel as an indication of current radio conditions at the remote receiver; and
changing the data rate for the communication channel based on the transmit power information.

(Emphasis added.)

In contrast to the explicit limitations of claim 1, Kim teaches a base station that sends data rate adjustments to individual mobile stations based on the reverse link interference (loading) at the base station and the distance between the base station and the mobile stations. See, e.g., “S53” and “S54” in Fig. 5 of Kim, and the accompanying description. It must be said that the rejection arguments do not rely on these teachings, but they are important to

understanding that the rejection arguments rely on mischaracterizations of Kim's teachings that are contradicted by a plain reading of Kim.

Further, Kim teaches an alternative where the base station sends a comparison result to each mobile station, based on comparing the signal strength or power of the mobile station's reverse link signal (as received at the base station) to a measure of reverse link interference at the base station. Here, the base station sends the comparison result to each mobile station and the mobile stations make corresponding data rate adjustments. See, e.g., Abstract of Kim, paragraphs [0041]-[0046] of Kim, and "S64" and "S66" in Fig. 6 of Kim, along with the corresponding description. It is from these additional teachings in Kim, apparently, that the examiner fashions the erroneous rejection argument.

First, it is notable that the rejection arguments against claim 1 do not discuss Fig. 6, but rather focus on Figs. 2 and 3 in Kim, and on the corresponding sections in Kim's specification. That is notable because Fig. 2 explicitly illustrates a mobile station and Fig. 3 explicitly illustrates a base station. While some of their processing obviously is related, the rejection arguments improperly pick and choose bits of mobile station processing and bits of base station processing, and "synthesize" these differing operations together to argue that claim 1 is anticipated.

For example, the rejection argument states that elements 32 and 33 (of Kim's Fig. 3) monitor a mobile station's transmit power, and therefore meet the limitation in claim 1 of "monitoring transmit power information for the communication channel as an indication of current radio conditions at the remote receiver." Paragraphs [0043] and [0046] of Kim actually teach that "interference level detector 32" detects the overall level of reverse link interference at a base station 30. Paragraph [0046] of Kim further teaches that "comparator 33" compares the interference level determined by detector 32 to an interference threshold. That comparison indicates the reverse link loading at the base station and that loading drives transmit data rate

adjustments directed to the mobile stations. These actual teachings are unambiguous, and it is noted that Kim flatly does not support the examiner's statement on p. 3 of the Office Action that Kim's 32/33 can be interpreted as monitoring a mobile station's transmit power. The anticipation rejection of claim 1 fails as a matter of law on this point alone.

Further error appears in the same passage of the Office Action on p. 3, where the examiner states that determinator 34 of Kim teaches the limitation in claim 1 of "changing the data rate for the communication channel based on the transmit power information." Contrary to the examiner's assertion, determinator 34 does not make data rate adjustments for a mobile station, based on the claimed transmit power information for that mobile station. Instead, paragraph [0046] of Kim plainly states that the determinator 34 makes data rate adjustments responsive to the comparison of reverse link interference to the threshold value. The anticipation rejection of claim 1 fails as a matter of law on this point alone.

Applicant notes that paragraph [0041] (and Fig. 6) of Kim discusses the transmit power levels of mobile stations. However, a careful reading of paragraph [0041] appears to state that Kim's base station determines transmit power level for a mobile station based on the received signal strength of transmissions from the mobile station. Kim goes on to describe generating a comparison result based on comparing the signal strength or power with the base station's measurement of reverse link interference (load). Finally, that section of Kim teaches that this comparison result could be sent to the mobile station for use by the mobile station in adjusting its transmit data rate. In any case, the rejection arguments presented on pp. 2 and 3 of the Office Action do not accurately describe these teachings, nor as a matter of law do those teachings anticipate claim 1.

While dependent claims 2, 11, 13, and 14 all add further limitations relative to claim 1, they are not anticipated by Kim at least for the reason that claim 1 is not anticipated by Kim. Applicant further notes that the anticipation rejections made against the various dependent

claims are even further at odds with the actual teachings of Kim, i.e., they are not supported by Kim.

For example, claim 11 states that “monitoring transmit power information for the communication channel as an indication of current radio conditions at the remote receiver comprises monitoring power control commands sent from the remote receiver that are associated with controlling the transmit power of the communication channel.” An electronic word search of Kim reveals that Kim does not discuss power control commands and by definition does not discuss monitoring power control commands sent from a remote receiver as the claimed embodiment of monitoring transmit power information.

Similarly, amended claims 13 and 14 are not taught by Kim. These claims are amended herein to correctly depend from claim 12, which filters the power control commands of claim 11 to obtain filtered values. Correspondingly, claim 14 states that “changing the data rate for the communication channel based on the transmit power information comprises initiating an upward rate change if the one or more filtered values indicate predominantly down commands.” (Claim 13 stipulates much the same, but for downward rate changes for predominately up commands.)

Remarkably, the rejection arguments against claims 11, 13 and 14 refer to paragraph [0046] of Kim and to the interference level detector 32 of Kim. None of these teachings mention, allude to, or even arguably relate to power control command monitoring, filtering of power control commands, or making data rate changes based on such values. Bluntly, these rejection arguments are self-evidently unsupported by Kim.

Turning to independent claim 23, Applicant notes that this claim can be understood as being a base station apparatus version of claim 1. In this regard, claim 23 includes similar limitations of monitoring transmit power information for a communication channel that is controlled up and down in power by a (remote) mobile station, and changing the data rate for the communication channel based on that monitoring.

The rejection arguments against claim 23 initially appear to differ from those made against claim 1. For example, the examiner alleges that Kim's base station transmission processor 35 represents the "transmitter circuits" in claim 23. Whether that equivalency is warranted is immaterial, because the substantive rejection arguments on p. 5 are nearly identical as those given against claim 1. The arguments made against the rejection of claim 1 apply with equal force to claim 23. Kim plainly and simply does not teach the limitations of claim 23, and the rejection of claim 23 thus fails as a matter of law.

As a further failing of the rejection against claim 23, Applicant submits that it appears that the rejections appearing on p. 5 of the Office Action are combining Kim's mobile station circuits and Kim's base station circuits to argue that the claimed base station is anticipated. Setting aside for a moment that Kim's mobile station and base station circuits do not work as the examiner alleges, it is self-evident that the attempted combination of base station and mobile station circuits cannot be argued as teaching the limitations of claim 23, in an arrangement identical to that claimed. For this further reason, the rejection of claim 23 fails. Should the examiner wish to continue with this line of rejection, Applicant expressly asks that the examiner clarify the record, to make clear which circuits and operations at Kim's base station are argued as anticipating claim 23. Of course, if the examiner proceeds in that direction, Applicant expects that the next Office Action will not be made final, so that Applicant has been given a fair opportunity to respond to any clarified rejection arguments.

Applicant submits that the record establishes that claim 23 is not anticipated by Kim. Therefore, dependent claims 24 and 33, which add further limitations, are not anticipated by Kim.

The Obviousness Rejections

Claims 3, 4, 6, 7, 15, and 25-32 are not obvious under 35 U.S.C. § 103(a) in view of Kim and in further view of Mimura (US 6,393,005). Irrespective of what Mimura teaches and whether Mimura combines in any legally obvious way with Kim, all obviousness rejections fail as a matter of law. Kim flatly does not teach what the examiner alleges, and the combination of Kim and Mimura does not teach or suggest all of the limitations of the claims rejected as obvious. Therefore, the examiner has failed to carry the burden of making out a *prima facie* case of obviousness.

Further, Mimura relates to controlling base station power. Indeed, in rejecting claim 3 as obvious, the examiner refers to boxes 301 and 302 in Fig. 5 of Mimura, and refers to col. 10, lines 15-25. Claim 3 depends from claim 1 and adds the limitation of monitoring transmit power information for the communication channel as an indication of current radio conditions at the remote receiver by “generating one or more filtered values of the transmit power and comparing the one or more filtered values against defined upper and lower power limits.” The sections referred to in Mimura appear to teach multiplying the individual transmit powers of channels being transmitted by the base station by previously determined reduction rate values held in a reduction rate storage unit 304. Mimura’s Abstract states that [t]he proportion of insufficiency of transmitting power (of the base station) is calculated as power reduction rate D, based on the results of comparison, and this reduction rate D is used to reduce the transmitting power of each communication channel.”

Thus, in direct contrast to the rejection arguments appearing on p. 8, it is not accurate to argue that Mimura can be interpreted as a filter that teaches filtering transmit power values and comparing them to upper and lower limits, within the meaning of claim 3. It might also be pointed out that the anticipation rejection of claim 1 relies on the examiner’s (incorrect) assertions relating mobile station transmit power and data rate adjustments. That contradiction

underscores the absurdity of the “motivation” statement appearing at the bottom of p. 8, where the examiner states that one of ordinary skill in the art would have been motivated to combine Mimura with Kim because the method taught by Mimura in the network of Kim “provides more accurate [sic] in term [sic] of generating a new value to compare.” A new value of what, one might ask in the context of Kim. Another question that springs to mind is what the new value might be compared to in Kim. Needless to say, the examiner will not be able to advance this line of rejection on its merits.

The remaining rejections of claims 4, 6, 7, 15, and 25-32 similarly fail as a matter of law, not least because Kim does not provide the teachings relied upon in their rejection, and for the further reason that Mimura does not teach what is alleged and/or does not combine in any sensible way with Kim. On that point, Applicant submits that none of the proffered bases for combining Mimura with Kim will survive scrutiny on appeal.

Further, at least for the reason that Kim does not provide the teachings relied upon in the rejections of claims 8, 10, 12, 16-19, 41, and 42 as obvious over Kim in view of Chen (US 2001/0040880), Applicant submits that all such rejections fail as a matter of law.

Further, at least for the reason that Kim and Mimura do not provide the teachings relied upon in the rejections of claims 20-22 as obvious over the combination of Kim and Chen in further view of Mimura, Applicant submits that all such rejections fail as a matter of law.

Further, at least for the reason that Kim does not provide the teachings relied upon in the rejections of claims 9, 34, and 35 as obvious over the combination of Kim in view of Cordier (US 2003/0099222), Applicant submits that all such rejections fail as a matter of law.

Finally, at least for the reason that Kim does not provide the teachings relied upon in the rejections of claims 36-40 as obvious over the combination of Kim in view of Lee (US 2003/0050086), Applicant submits that all such rejections fail as a matter of law.

Closing

For the reasons given above, Applicant submits that all rejections are improper and should be withdrawn. Applicant further submits that all claims patentably define over the cited references, and looks forward to the examiner's next correspondence.

Respectfully submitted,

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Dated: August 29, 2007

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